



## **PROJECT REPORT**

### **1. INTRODUCTION**

#### **1.1 Overview: -**

The business problem at hand is the prediction of house prices in a metropolitan city in India. The real estate market in such cities is complex and dynamic, making it challenging for potential home buyers, real estate agents, and investors to accurately estimate property values. By developing a predictive model using relevant datasets and features, stakeholders can gain insights into the factors influencing house prices and make informed decisions regarding property investments. The goal is to provide a reliable and accurate prediction tool that assists users in navigating the competitive real estate market and maximizing their returns.

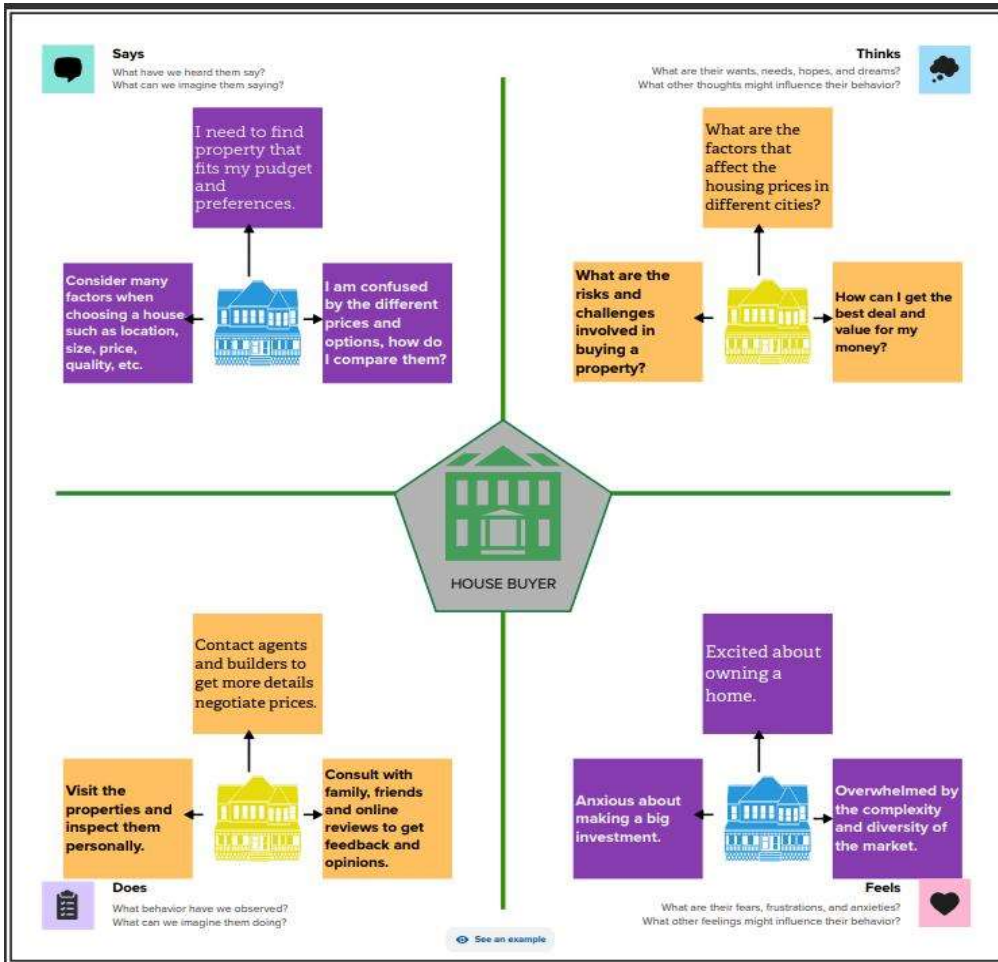
#### **1.2 Purpose: -**

**Social Impact:** Houses with best facilities in India. By analyzing the number of bedrooms and Services provided, may somebody with the dilemma to buy or not buy his/her own houses based on price and best facilities.

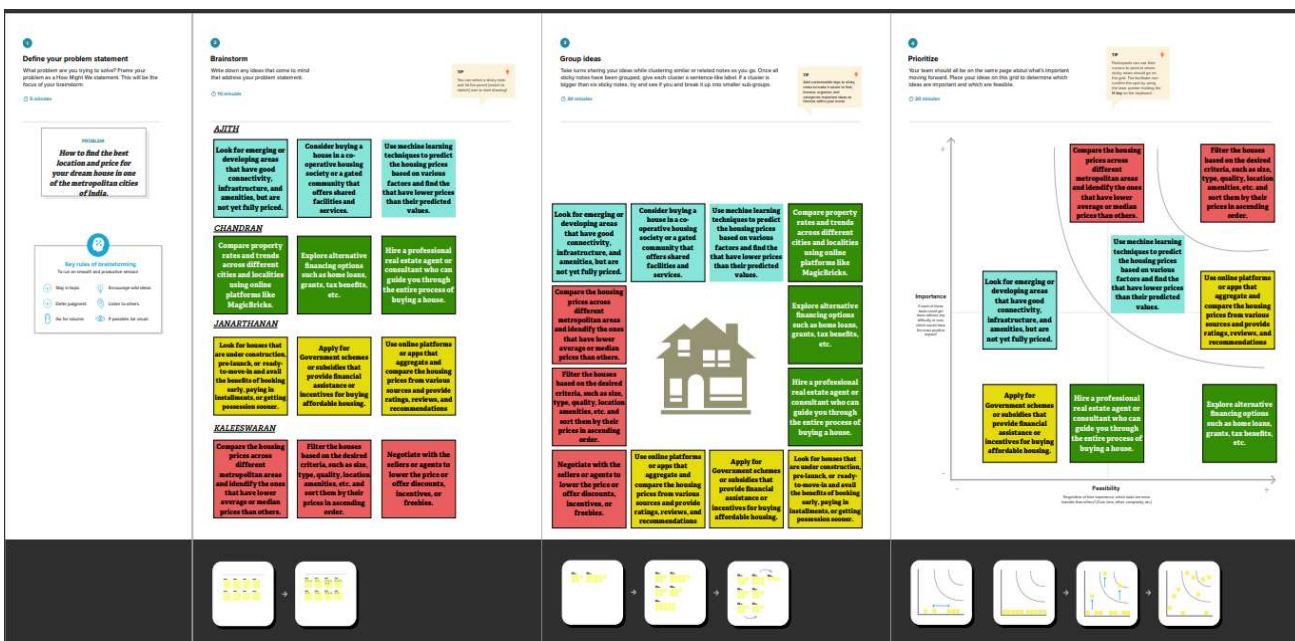
**Business Model/Impact:** Can make this visualization application available for people, for more insights and ideas can ask for payment and can give these insights to make the understand and help in the sense of buying house.

## 2. PROBLEM DEFINITION & DESIGN THINKING

### 2.1 Empathy Map: -

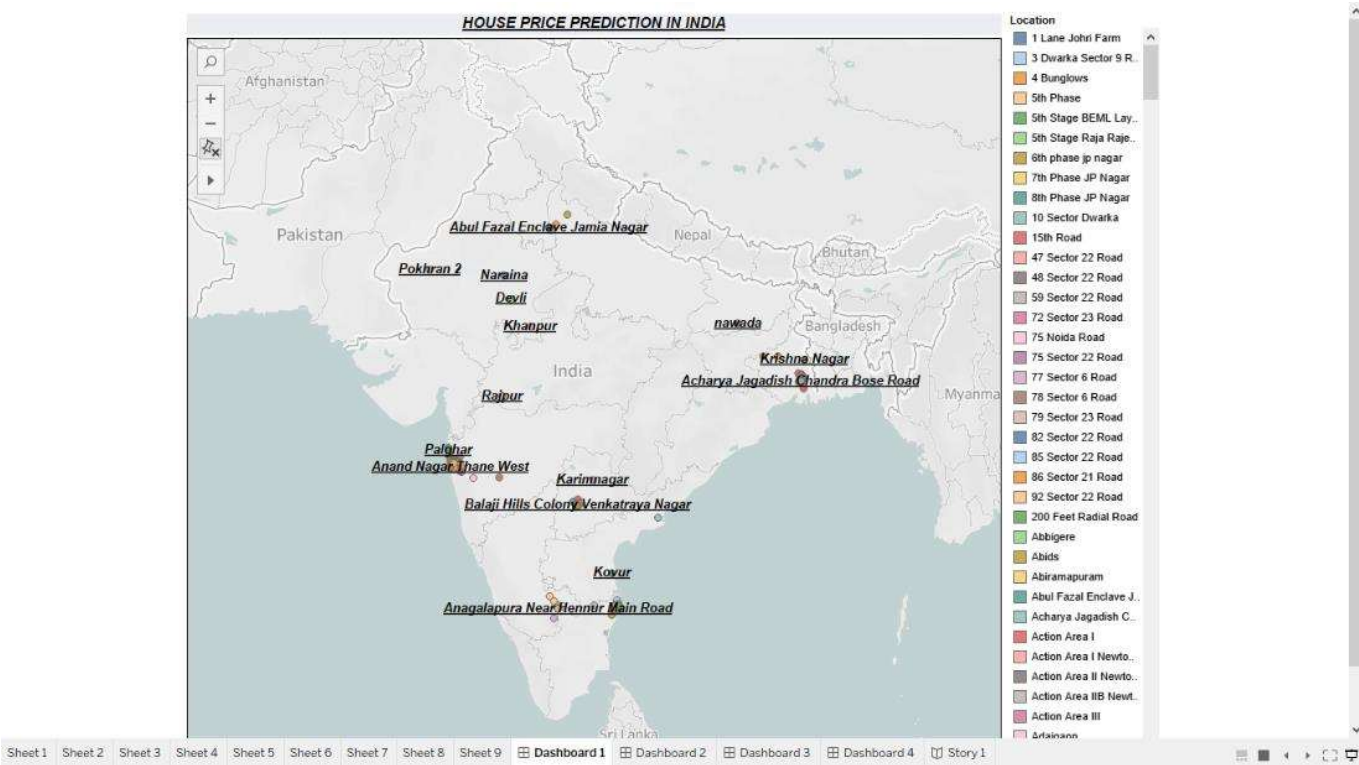


### 2.2 Ideation & Brainstorming Map: -

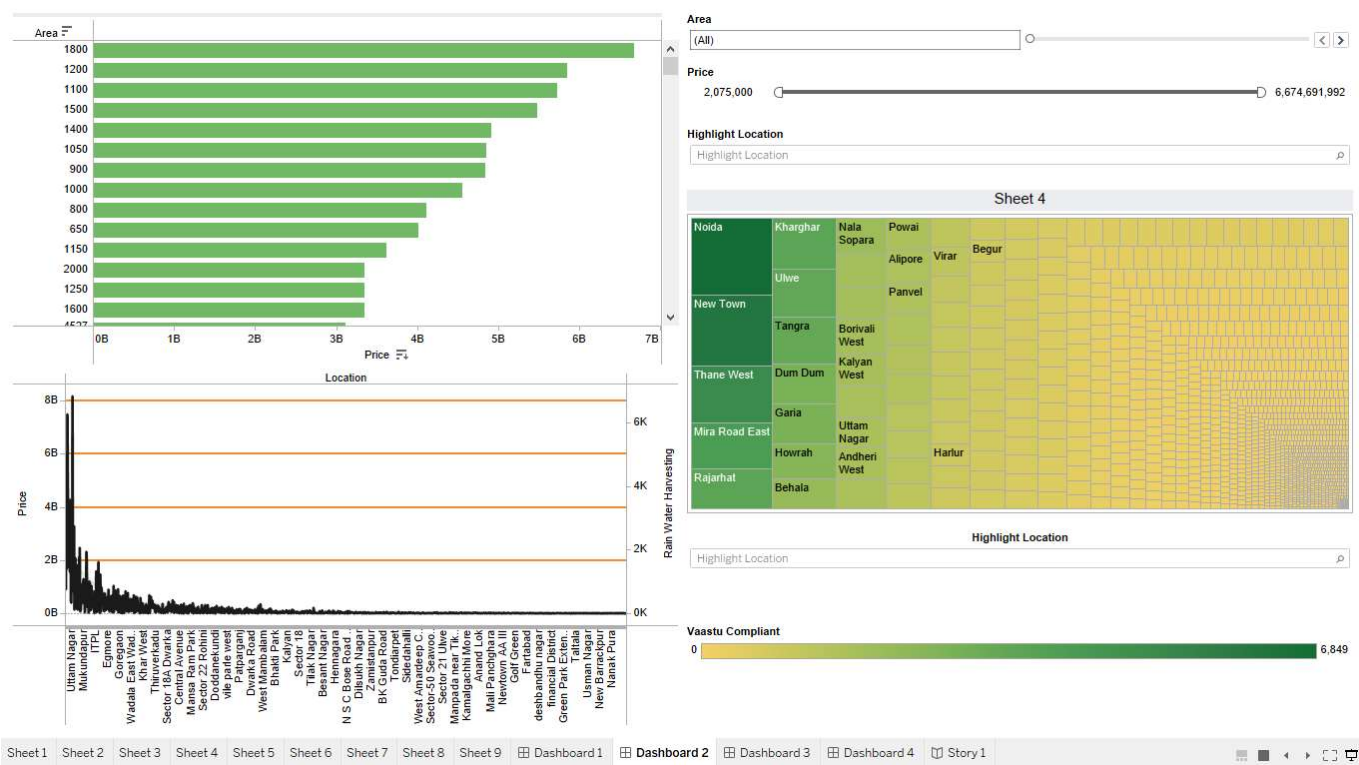


3. RESULT

Dashboard 1



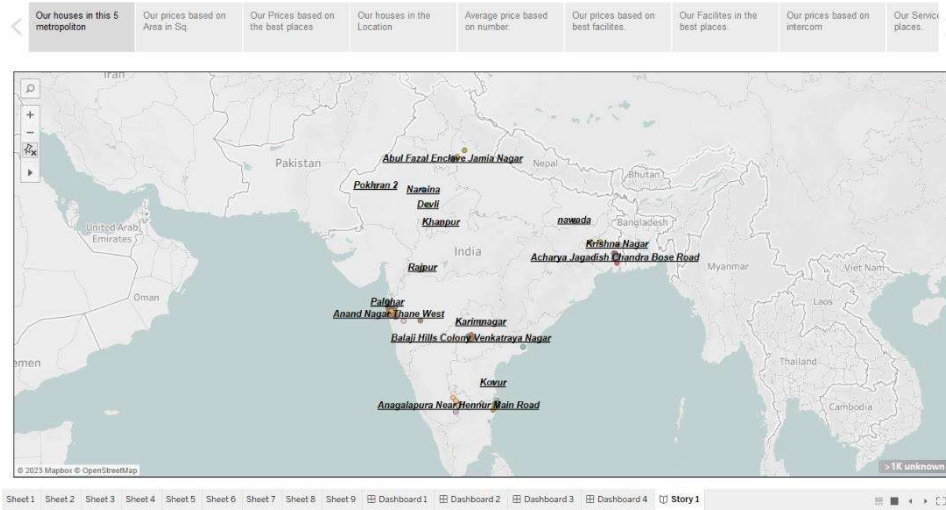
Dashboard 2



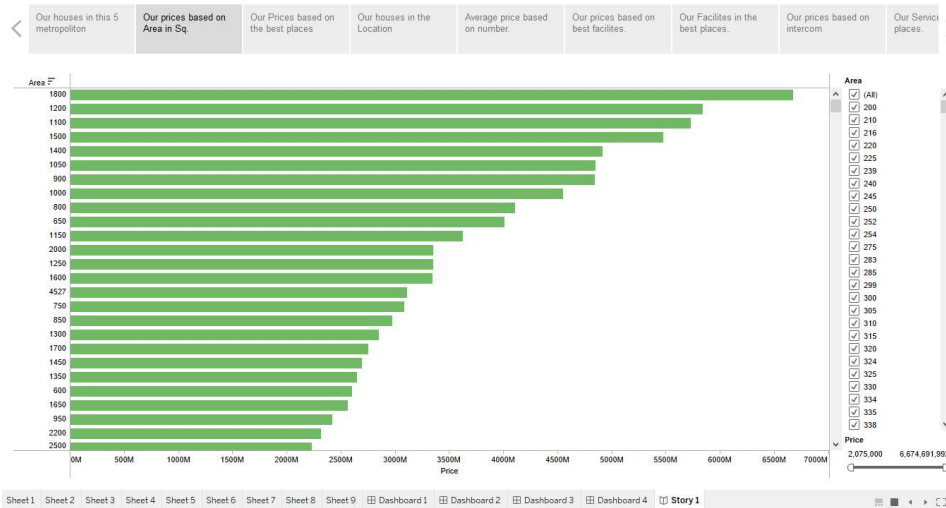




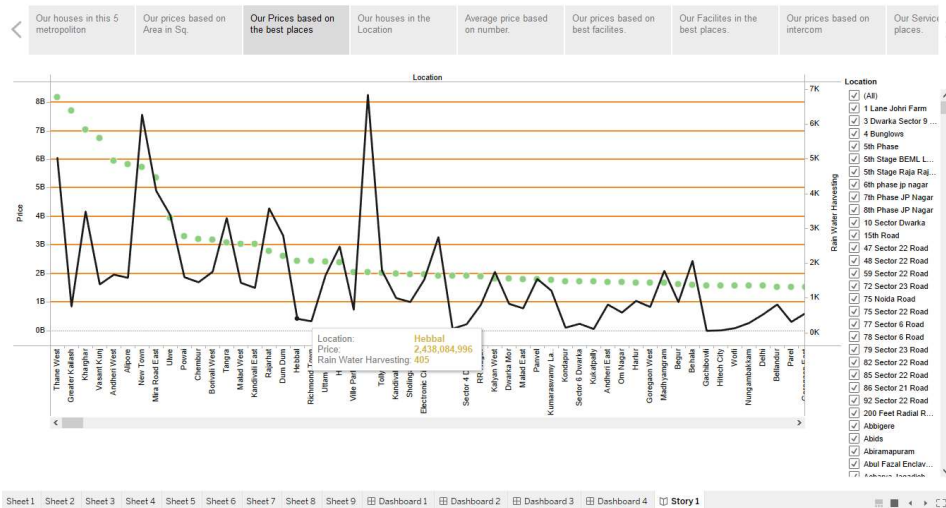
### Story 1



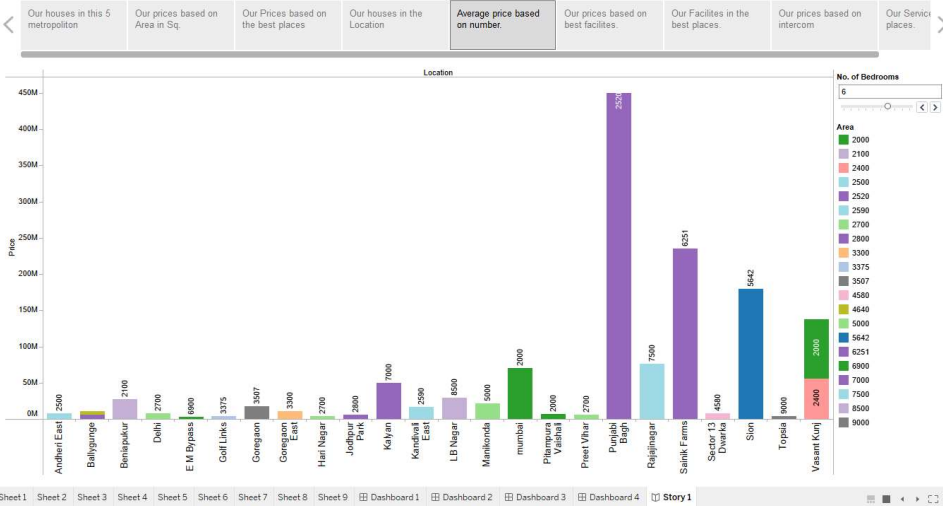
### Story 1



### Story 1



Story 1



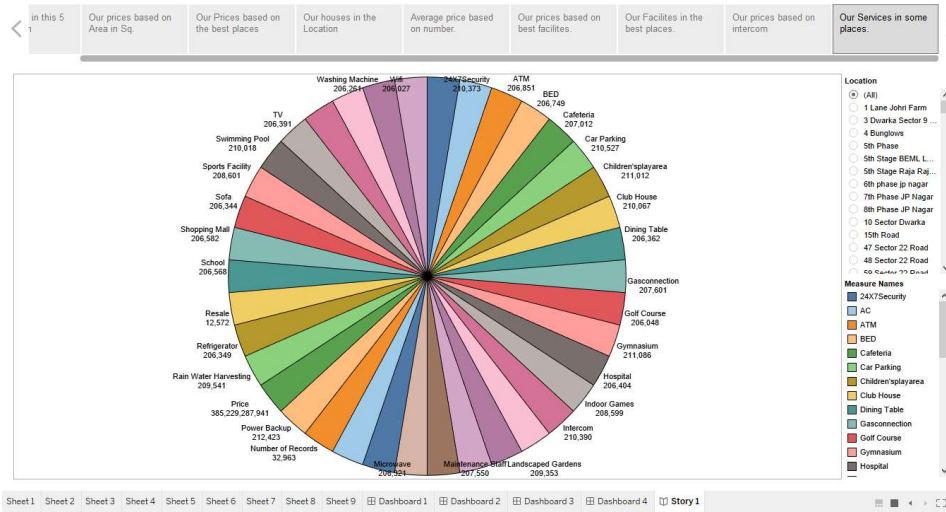
Story 1



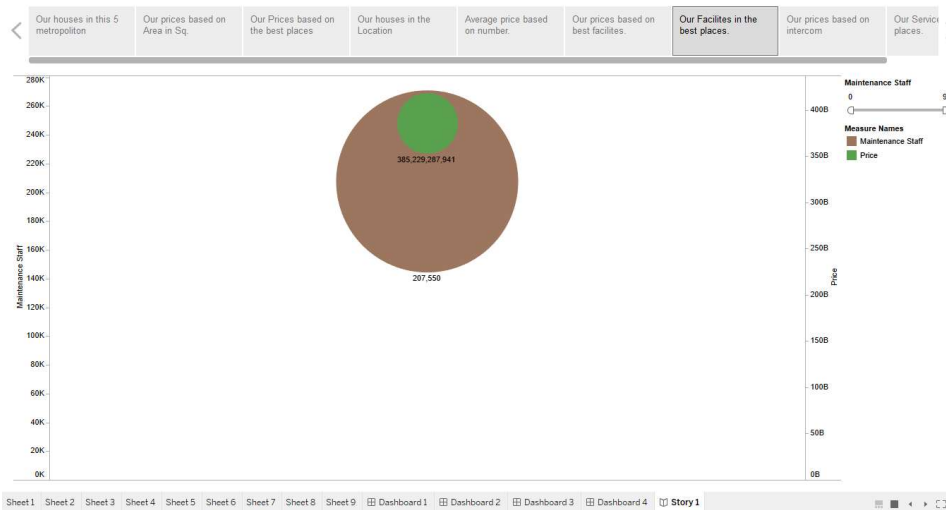
Story 1



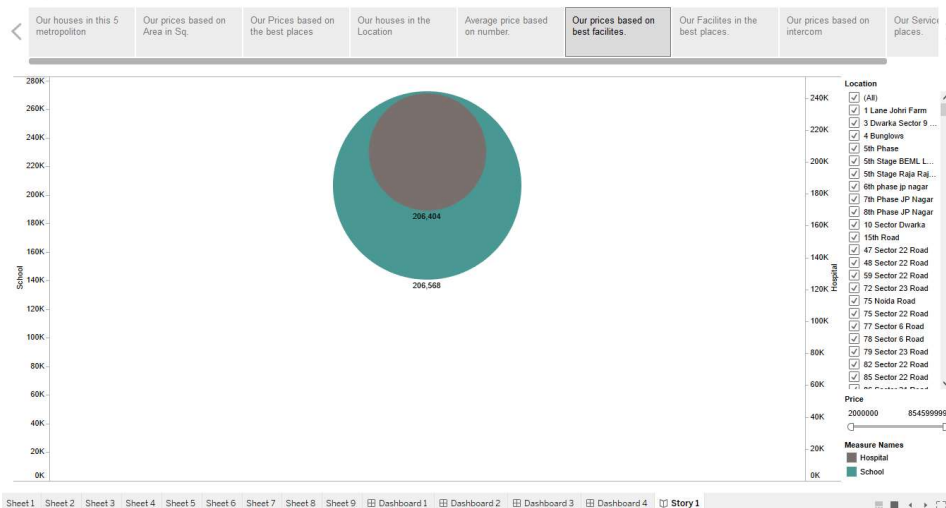
## Story 1



## Story 1



## Story 1



## 4. ADVANTAGES & DISADVANTAGES

- The project can provide a valuable solution for potential home buyers, real estate agents, and investors who want to estimate house prices in different metropolitan cities in India.

- The project can leverage historical sales data, property details, and location-specific information to create a predictive model that can accurately estimate house prices.
- The project can use Tableau as a tool for data analysis, data preparation, and business intelligence, creating a dashboard and a story that can visualize and communicate the insights from the data.
- The project can address the requirements of scalability, real-time updates, user-friendly interface, and transparency for the prediction model, ensuring that it meets the needs of the stakeholders.

## 5. APPLICATIONS

There are many areas where analyzing housing prices can be useful. Some of them are:

- **Real estate market:** By predicting the sale price of a house based on its features, location, and condition, real estate agents, investors, and developers can make better decisions about buying, selling, or renting properties. They can also identify the factors that affect the demand and supply of houses in different regions and segments.
- **Home buyers and sellers:** By forecasting the future price of a house, home buyers and sellers can plan their budget, negotiate deals, and avoid frauds. They can also compare the prices of different houses and find the best value for their money.
- **Policy makers and researchers:** By analyzing the trends and patterns of housing prices, policy makers and researchers can understand the impact of various economic, social, and environmental factors on the housing market. They can also design and evaluate policies and interventions that aim to improve the affordability, accessibility, and sustainability of housing.

## 6. CONCLUSION

### Dashboard 1: -

Map based on Longitude (generated) and Latitude (generated).



On the visualization location page data using latlong coordinates these gains the insights about the data that is given.

### **Dashboard 2: -**

Our dashboard 2 is based on the vastu complaints based on location and some area that is square feet and this is based on the location and price with rainwater harvesting.

### **Dashboard 3: -**

Now this dashboard is all about the visualization based on features, features that are given in housing complexes based on location and this is based on number of bedrooms and based on prices given in the locations.

### **Dashboard 4: -**

The visualization is based on location price and intercommunication which are provided by the housing complexes in the areas.

### **Story: -**

This data visualization will help us to explore location, house prices and essentials and more from understanding the impact of restaurants once to find the perfect home and with nearby hospital, schools and nearby places and facilities and like this story will enlighten you to how to buy and where to buy the house in which location is the best and number of bedrooms and based on this we can check the all the facilities price based on intercom and services what they provide in the house price, house communities and average price based on number of bedrooms this will help you to more enlighten the features of house price where to buy the house in which location.

## **7. FUTURE SCOPE**

The future scope of the analysis of housing prices is to extend and improve the data, methods, and results of the project. Some possible directions for future work are:

- To collect and include more data on housing transactions and characteristics from different sources, such as government agencies, real estate portals, surveys, or web scraping. This can help increase the sample size, coverage, diversity, and representativeness of the data.
- To explore and include more variables and measures that may affect the housing prices, such as the age, quality, design, or layout of the property, the distance to public transport, schools, hospitals, or markets, the crime rate, pollution level, or climate of the locality, or the income, education, or preferences of the buyers or sellers. This can help capture and measure more factors that influence the value of residential properties.
- To apply and compare more techniques and models to explore and predict the housing prices, such as linear regression, logistic regression, decision tree, random forest, support vector machine, neural network, or deep learning. This can help improve the accuracy and reliability of the models and predictions.
- To interpret and communicate the results and implications of the analysis more clearly and effectively, such as using interactive dashboards, infographics, animations, or storytelling. This can help enhance the understanding and impact of the findings and insights for different stakeholders.